Appl. No. 09/236,995 Filed: January 26, 1999

Page 4

## Amendments to the Claims:

Please cancel claims 4, 5, and 13-37 without prejudice to our disclaimer of the subject matter contained therein. Claims 13-37 are cancelled due to the restriction requirement.

Please amend claims 1-3 and 6, 11, and 12 as follows:

- 1. (Currently Amended) A plant that is genetically modified to reduce or eliminate the activity of one or more proteases in its protein storage tissue, wherein said protease is selected from the group consisting of α-vacuolar processing enzyme, β-vacuolar processing enzyme, γ-vacuolar processing enzyme, ε-vacuolar processing enzyme, aspartic protease AP1, and aspartic protease AP2.
- 2. (Currently Amended) The plant of claim 1 wherein said protein storage tissue is seed <u>tissue</u>.
- 3. (Currently Amended) The plant of claim 1 wherein said protein storage tissue is selected from the group consisting of <u>tuber tissue</u>tubers, <u>root tissue</u>roots, and <u>leaf tissue</u>leaves.
  - 4. (Cancelled)
  - 5. (Cancelled)
- 6. (Currently Amended) The plant according to claim 1 wherein at least one of said one or more proteases has an amino acid sequence selected from the group consisting of:
- a) the amino acid sequence encoded by the nucleic acid sequence of SEQ ID NO:1;
- b) the amino acid sequence of a fragment of the amino acid sequence set forth in SEQ ID NO:2 wherein said fragment has protease activity and comprises at least 10010 contiguous amino acids of SEQ ID NO:2;
- c) the amino acid sequence of a sequence variant of a polypeptide having the amino acid sequence set forth in SEQ ID NO:2 wherein said sequence variant has protease

Appl. No. 09/236,995 Filed: January 26, 1999

Page 5

activity and is encoded by a nucleotide sequence that hybridizes to the complement of the nucleotide sequence shown in SEQ ID NO:1 under stringent conditions; and,

- d) the amino acid sequence of a sequence variant of a polypeptide having the amino acid sequence set forth in SEQ ID NO:2 wherein said sequence variant has protease activity and is encoded by a nucleotide sequence having at least 90% 60 % sequence identity to the nucleotide sequence of SEQ ID NO:1.
  - e)——the amino acid sequence set forth in SEQ ID NO:2.
  - 7. (Original) The plant according to claim 1 wherein said plant is a dicot.
- 8. (Original) The plant according to claim 7 wherein said dicot is selected from the group consisting of *Arabidopsis*, soybean, sunflower, canola, cotton, and safflower.
  - 9. (Original) The plant of claim 1 wherein said plant is a monocot.
- 10. (Original) The plant of claim 9 wherein said monocot is selected from the group consisting of maize, wheat, rice, barley, oats, rye, and millet.
- 11. (Currently Amended) Transformed seed obtained from the plant of claim 1, wherein said seed is genetically modified to reduce or eliminate the activity of one or more proteases selected from the group consisting of  $\alpha$ -vacuolar processing enzyme,  $\beta$ -vacuolar processing enzyme,  $\gamma$ -vacuolar processing enzyme,  $\alpha$ -vacuolar processing enzyme, aspartic protease AP1, and aspartic protease AP2.
- 12. (Currently Amended) The plant of claim 1 wherein said plant is transformed with an expression cassette comprising a promoter operably linked with a <u>nucleotide sequence</u> encoding a polypeptide of interest, said promoter selected from the group consisting of a constitutive promoter, a tissue-preferred promoter, a leaf-specific promoter, a root-preferred promoter, and a seed-preferred promoter.

13-37 (Cancelled)

Please add new claims 38-47.

- 38. (New) The plant of claim 1, wherein at least one of said one or more proteases is selected from the group consisting of  $\alpha$ -vacuolar processing enzyme,  $\beta$ -vacuolar processing enzyme,  $\gamma$ -vacuolar processing enzyme, and  $\epsilon$ -vacuolar processing enzyme.
- 39. (New) The plant of claim 1, wherein said one or more proteases are selected from the group consisting of  $\alpha$ -vacuolar processing enzyme,  $\beta$ -vacuolar processing enzyme,  $\gamma$ -vacuolar processing enzyme, and  $\varepsilon$ -vacuolar processing enzyme.
- 40. (New) The plant of claim 1, wherein at least one of said one or more proteases is selected from the group consisting of aspartic protease AP1 and aspartic protease AP2.
- 41. (New) The plant of claim 38, wherein at least one of said one or more proteases is  $\beta$ -vacuolar processing enzyme.
- 42. (New) The plant of claim 38, wherein at least one of said one or more proteases is  $\gamma$ -vacuolar processing enzyme.
- 43. (New) The plant of claim 38, wherein at least one of said one or more proteases is ε-vacuolar processing enzyme.
- 44. (New) The plant of claim 40, wherein at least one of said one or more proteases is AP1.

Appl. No. 09/236,995 Filed: January 26, 1999

Page 7

45. (New) The plant of claim 41, wherein at least one of said one or more proteases is AP2.

- 46. (New) The plant of claim 1, wherein said plant is genetically modified to reduce or eliminate the activity of more than one protease in its protein storage tissue.
- 47. (New) The plant of claim 46, wherein the proteases are selected from the group consisting of  $\alpha$ -vacuolar processing enzyme,  $\beta$ -vacuolar processing enzyme, and  $\epsilon$ -vacuolar processing enzyme.